

FIG. 1

atgttagccaacagctcctcaaccaacagttctgttccctgtcctgactaccgacact
acccaccgcctgcacttggtgttacagcttggctggctccggctccctcaac
gcttagccctctgggtttcctgcgcgcgtgcgcgtgcactcggtggtagcgtgtac
atgtgtaacctggccggcagcactgtcttacccctctcgctgcccgtctctcc
tactacgcactgcaccactggccctccccacccctgtgccagacacggccatc
ttccagatgaacatgtacggcagctgcacatcttcctgtatgcacatcaac
gtggaccgctac
ggcccatcgtgcacccgcgtgcacactgcgcacccgtcggccggccggcgtggc
ctctgcctggcgtgtggcgctcatcctgggtttggccgtgcccggccgtgcac
aggccctcgcttgcgcgttgcgcctaccggacactcgaggtgcgcctatgctt
cgagagcttcagc
gacgagctgtggaaaggcaggctgtgcgcctcgctgtggccgaggcgtggcttc
ctgctgcgcctggcgccgggttactcgctggccgagcttctgtgacgctggcgc
ccgacgccacgcagagccagcggccggagaagaccgtgcgcctcctgtggct
aaccctc
gtcatcttcctgtgtgttgcgcctacaacagcacgcgtggcggttacggctgct
cgagcaagctgtggcgccagcgtgcgcctgcgcgtgcgcgggtgtatg
gtatgggtgtgtggccggccaaactcgctgtggacccgtgggtactacttagc
ggcagggttccgcaacaccctgcgcggcgtggactccgcaccggccaggacctg
gccaccaacgggacgcggccgtcgcaatccgaaagtccgcgtcaccaccgac
gccaccaggccggatgccccagtcagggctgtccgaccctccgactcccactctg
tcttccttacacagtgtccccaggattccgcctctga

FIG. 2

MLANSSTNSSVLPDPYRPTHRLHLVVYSLVLAAGLPLNALALWVFLRALRVHSVSVY
MCNLAASDLLFTLSLPVRLSYYALHHWPFPDLLCQTTGAI FQMNMYGSCIFLMLINVDRY
AAIVHPLRLRHLRRPRVARLLCLGVWALILVFAVPAARVHRPSRCRYRDLEVRLCFESFS
DELWKGRLLPLVLLAEALGFLLPLAAVYSSGRFWTLARP DATQSQRRLKTVRLLLNL
VIFLLCFVPYNSTLAVYGLLRSKLVAAASVPARDRVGVLMVMVLLAGANCVLDPLVYYFS
AEGFRNTLRGLGTPHRARTSATNGTRAALAQSERSAVTTDATRPDAASQGLLRPSDSHSL
SSFTQCPQDSAL

FIG. 3A

gcgtccgaaaaaaaaaaaaattccttacataactacaacatgaatagatcttggaaacat
tatgctaagtgaaataaaccagacacaaaaggacaatattgtatgattccactcatatg
aggtatctagaataggcaaattcattgagacagaaagttagactagaaccagaagctgaat
gggtgcggtagtactgcttaatgactgcagagttgtgcttggatgatgaaaaag
ttctattctggaaacagagactgtgtgacggtaagcaacactgtcttggatgatgatgatg
tggatgatgatgatgatgatgatgatgatgatgatgatgatgatgatgatgatgatgatg
tagacctgctaggggagcacttggcaaaactcaacccacagggcctccctgcctagca
agactgtgtcaaaatttattcacatgtggcttggatgactagcatgcaatcagcc
tatgagggcattattatattatcccatttacagatgaagaaactgagaagtcaaa
ccattaagctgaacccagttgcttgcaccacaaatccagccctcacaggcgcagtgt
catgtatgcgttaaggctggatgttgcatttgcatttgcatttgcatttgcatttgc
ttgtctgacatggagtctcactctgtcaccaggctggatgcagtggcgtatctcgc
tcactgcaacccgcctccgggttcaaggacttcctgtcagcctccatgtactc
aaagagttgacccttattcttgataatgaggagctagcctagcacctggatgatg
gtgtccataagaccacattgatttgcatttgcatttgcatttgcatttgcatttgc
taaaggaggtggggcaaaagacttttgcatttgcatttgcatttgcatttgcatttgc
ttctatgagctcagtaagcaaggaaagaaggaaaggagatcttgcatttgcatttgc
acctaagcgttttacacacgtcatcttaatctccaaacctcatgaattctctctct
ctctcatttttgagacagactctcgctgtcaccaggctggatgcagtggcgtat
ctcgactcattgcaacccgcctccggattcaatcaatttcattgccttagcctactg
aggagctggattacaagtgcacgccaccataccggctaatcttgcatttgcatttgc
gcaagatgttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
cacatcagccctccaaagtgcatttgcatttgcatttgcatttgcatttgcatttgc
ttttttttgagatggagtctcggttgcatttgcatttgcatttgcatttgcatttgc
cagctcactgcaacccgcctccggattcaatgcatttgcatttgcatttgcatttgc
tagctggactacaggtgcatttgcatttgcatttgcatttgcatttgcatttgc
cagggtttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
cctcaggctccaaagtgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
ttctttcttttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
gaggctcactgcaacccgcctccggattcaatgcatttgcatttgcatttgcatttgc
tcacaaggatgtggactacggcatgtgcatttgcatttgcatttgcatttgcatttgc
aatatttttatatttatttttttgcatttgcatttgcatttgcatttgcatttgcatttgc
gcaatgggtgatctcggttgcatttgcatttgcatttgcatttgcatttgcatttgc
tcctgagtagctggattacaggcgcctgcatttgcatttgcatttgcatttgcatttgc
tagtagagacaggatgttgcatttgcatttgcatttgcatttgcatttgcatttgc
atccgcggccacccgcctccaaagtgcatttgcatttgcatttgcatttgcatttgc
cttattttatatttattttatatttgcatttgcatttgcatttgcatttgcatttgc
tgcccgaggctggatgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
caaggctcattttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
ccaggctcattttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
gtctcgactcctgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
acaggcgtgaggccaccgcgcctggctattttatattttgcatttgcatttgcatttgc
tgtccaggctggatgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
caagcgattctcctgtctcatttgcatttgcatttgcatttgcatttgcatttgc
cccaggctcattttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc
tcgaactcctgcatttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgc

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FIG. 3B

gtgtgagccactgcacctggccctgtatTTTgttagagatggggTTTcgccgtttgc
ccaggctggccccaaactccatTTTcaagcaattggctgcctggccctccaaagtgc
caggattacagggtgtaaaggcattgcacccagccaagattaattttttgaagtacacaa
ctaggcaagtttagcaaaaccaagattaaacctaggcatccgagtcctgcctcaaacc
tgggtgtttAACCTATACTATAGTCTGCCGTAGGAACCTATTCTAGCCAAATGGCA
GACTTGAGGCTGAGAAAAGATTcagaaggcctgccagtggagctaaacatTTGTGTGC
AGCCCTGTCTCTGTATAACTTCCGGCTTGCCTCCTATTCCAGGTCTGTGCTGATG
AGCTGTGACCAAACGCACCCAACCCTGGCAGCCATCTGTCCCTGCAGCCATAGCCCACA
TTCCCATGACCTCCCTCTGCTTGGGACCATGTCTGTACAGCCTCTAGGCCCCAGC
CCGGAGGTGAATGCCATGCCATGATTCTGGTGTGCTCCATGGCATCCCCAGCCTAGCTC
CCAATCCCACTTTGGCACG

FIG. 4

ACACACATGCCATTGCGCTGTCCGTGCCGACTCCCAACGCCCTCGTTCTGGGAGGCCTT
 ACAGGGTGTACACACAAGAAGGTGGCTGGGCACTTGGACCTTGGGTGGCAATTCCAGC
 TTAGCAACGCAGAAGAGTACAAAGTGTGGAAGCCAGGGCCCAGGGAAGGCAGTGCTGCTG
 GAAATGGCTTCTTAAACTGTGAGCACGCAGAGCACCCCTCTCCAGCGGTGGAAAGTGA
 TGCAGAGAGGCCACCGTCAGAGGGCAGAAGAGGACGAATGCCCTTGGGTGGCAGGG
 CATTAAACTGCTAAAGCTGGTAGATGGAACAGAAAATGGCATTCTGGATCTAAACCG
 CCACAGGGGCCTGAGAGCTGAAGAGCACCAGGTTGGACAAAGCTACTGAGATGCCT
 GTTCATCTGCTGACTTCTGTCTAGGCTATGGATGCCACCCCTTCATTCGGCCTAGG
 CTTCCCCTGCTCACCACTGAGGCCTAATACAAGAGTTCTATGGACAGAACTACATTCTT
 TCTCGCATAGTGAATTGTGACAATTAGACTTGGCATCCAGCATGGGATAGTTGGGCAA
 GGCAAAACTAACTTAGAGTTCCCCCTCAACACATCCAAGTCAAACCCCTTTAGGTT
 ATCCTTCTCCATCACATCCCCTTTCCAGGCCTCCATTAGGTCTTAATATTCTT
 TTTCTTTCTCTCTCGTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT
 CTCTCTCTCTCCCTCTCTCCCTTGTCAGAGTAAGGATAAAATTCTTCTACTAAAGCAC
 TGGTTCTCAAACATTGGTCTCAGACCCACTCTAGAAATTGAGGATCTCAAAGAGCT
 TTGCTTATATTGGTCTTTGATACCTACACTAGAAATTAAAGCGAATACATTTT
 AAAATAAATACACATGCACACATTACATTAGCCATGGGAGCAATAATGTCACCCACACA
 CTTCATGAAGCCTCTGGAAAACCTACAGTATACTTGTGAGAGAATGAGAGTGAAGGGA
 CAAATAACATCTGTGTAGCAGTATTATGAAAATAGCTTGACCTCGTGGACTTCCTCAGAG
 GGTGGTCCCTGGATCACACTTGAGAACCATACTTGTCTGAAGTATTGGAGTTCATGT
 CTAACCTCTCCAGGGCATTATGTACAGTGTCTTTATTACTGTGGGGAGAGGGCAGTG
 CTAATAAAATTAACTACTGATAAAAAAAAAAAAAAG

FIG. 5

MLANSSTNS SVLPCPDYRP THRLHLVVYS LVLAAGLPLN ALALWVFLRA
 LRVHSVSVY MCNLAASDLL FTLSLPVRLS YYALHHWPFP DLLCQTTGAI
FQMNMYGSCI FLMLINVDRY AAI VHPLRLR HLRRP RVARL LCLGVWALIL
VFAVPAARVH RPSRCRYRDL EVRLCFESFS DELWKGRLLP LVLLAEALGF
LLPLAAVVYS SGRVFWTLAR PDATQSQRRL KTVRLLLNL VIFLLCFVPY
NSTLAVYGLL RSKLVAASVP ARDRVRGVLM VMVLLAGANC VLDPLVYYFS
 AEGFRNTLRG LGTPHRARTS ATNGTRAALA QSERSAVTTD ATRPDAASQG
 LLRPSDHSLSL SSFTQCPQDS AL

FIG. 6A

GP68_HUMAN
O46685
O15132
P2Y9_HUMAN
P2Y5_CHICK
P2Y5_HUMAN
HGPRBMY3
GPRH_HUMAN
O35811
SSR4_HUMAN

GP68_HUMAN
O46685
O15132
P2Y9_HUMAN
P2Y5_CHICK
P2Y5_HUMAN
HGPRBMY3
GPRH_HUMAN
O35811
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GP68_HUMAN
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P2Y9_HUMAN
P2Y5_CHICK
P2Y5_HUMAN
HGPRBMY3
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O35811
SSR4_HUMAN

GP68_HUMAN
O46685
O15132
P2Y9_HUMAN
P2Y5_CHICK
P2Y5_HUMAN
HGPRBMY3
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O35811
SSR4_HUMAN

GP68_HUMAN
O46685
O15132
P2Y9_HUMAN
P2Y5_CHICK
P2Y5_HUMAN
HGPRBMY3
GPRH_HUMAN
O35811
SSR4_HUMAN

~~~~~MGNITADNSMSCTIDHTIHQTLA  
~~~~~MGNITADNTSMNCIDHTIHQTLA  
~~~~~MGDRRFIDFQFQDSNSSLRPRLGNAATANNTCIVD.DSFK..YNLN  
~~~~~MGDRRFIDFQFQDSNSSLRPRLGNAATANNTCIVD.DSFK..YNLN  
~~~~~MVSSNCSTE.DSFK..YTLY  
~~~~~MVSVNSSHCFYN.DSFK..YTLY  
~~~~~MLANSSTNSSVLPCPDYRPTHRLH  
~~~~~MNGLLEVAPPGLITNF..SLATAE.QCGQET.PLENMLF  
~~~~~MTSAESELLTSLCPSPSSGDGDCRFNE.EFKELL  
MSAPSTLPPGEEGLGTAWPSAANASSA~~PAEA~~EEAVAGPGDARAAGMVAI  
  
PVVYVTVLVVGFPANCLSLYFGYLOIKARNELGVYICNLTVADLFYICSL  
PVVYVMVLVVGFPANCLSLYFGYLOIKARNELGVYICNLTVADLFYICSL  
GAVYSVVFITLGLITNSVSLFVFCFRMKMRSETAIFITNLAVSDLLFVCTL  
GAVYSVVFITLGLITNSVSLFVFCFRMKMRSETAIFITNLAVSDLLFVCTL  
GCVFMSMFVFLGLI~~AN~~CVAYI~~Y~~IFTTFLKVRNETTTYMLNLAISDLLFVFTL  
GCMFMSMFVFLGLV~~SN~~CVAYI~~Y~~IFTC~~V~~LKVRNETTTYMLNLAISDLLFVFTL  
LVVYSLVLAAGLPLNALALWVFLRLRVHSVSVYMCNLAASDLLFTL~~SL~~  
ASFYLLDFI~~L~~LVGNTLALWLFIRDHKSGTPANVFLMHLAVADLSCV~~L~~V~~L~~  
PMSYAVVFLGLALNAPTLWLFRLRPWDATATYMFHLALSDTLYV~~L~~SL  
QC~~Y~~YALVCLVGLVGNALV~~I~~FV~~I~~RYAKMKTATN~~Y~~YELNLA~~A~~DE~~E~~MLSV  
  
PFWLQY.VLQHDNWSHGDLSCQVCGILLYENIYISVGFLCCISVDRL~~Y~~LAV  
PFWLQY.VLQHDHWSHDDLSCQVCGILLYENIYISVGFLCCIS~~T~~DR~~Y~~LAV  
P~~F~~K~~I~~FEYNF..NRHWPFGDTLCK~~T~~SGTAFL~~T~~NYGSM~~L~~FLTCISVDRE~~L~~AI  
P~~F~~K~~I~~FEYNF..NRHWPFGDTLCK~~T~~SGTAFL~~T~~NYGSM~~L~~FLTCISVDRE~~L~~AI  
P~~F~~R~~I~~YYFV..VRNWPFGDVLC~~K~~ISVTLFYTNMYGS~~T~~FLTCISVDRE~~L~~AI  
P~~F~~R~~I~~YYFT..TRNWPFGD~~L~~LCK~~T~~SVMLFYTNMYGS~~T~~FLTCISVDRE~~L~~AI  
PVR~~L~~SYYA..LHHWP~~F~~DLLCOT~~T~~GATEQ~~M~~NYGSC~~T~~FLML~~I~~ND~~Y~~RAAI  
PTRLVYHFSG.NHW~~P~~FGETACRLTGFLFYLNMYAS~~T~~YFLTCISADRE~~L~~AI  
PT.LV~~Y~~YYAARNHWPFGTGLCKFVRFLFY~~W~~LYCSVLF~~L~~TCISVHRYLG~~I~~  
PF..VASSAALRHW~~P~~FGSVLCRAVLS~~V~~DGLNM~~M~~TSVFC~~L~~T~~V~~LSVDR~~Y~~VAV  
  
AHPFRFHQFRTLKA~~A~~VGVS~~V~~WAKEL...LTSIYFLMHEEVIEDE~~N~~QHR  
AHPFRFHQFRTLKAAMGV~~S~~AL~~I~~W~~K~~EL...LTSIYFLMHEEVVEDADRHR  
VY~~P~~FR~~S~~RT~~T~~TR~~R~~NS~~A~~IVCAGVW~~I~~VL~~S~~CG~~I~~SAS~~T~~FS..TTNV..NNATT  
VY~~P~~FR~~S~~RT~~T~~TR~~R~~NS~~A~~IVCAGVW~~I~~VL~~S~~CG~~I~~SAS~~T~~FS..TTNV..NNATT  
VHPFR~~S~~K~~T~~L~~R~~TKR~~N~~ARI~~V~~C~~V~~AV~~W~~ITVLAG~~S~~PAS~~F~~Q..STN~~R~~ONNT~~E~~QR  
VY~~P~~E~~K~~S~~K~~T~~L~~R~~T~~TKR~~N~~AKI~~V~~C~~T~~GV~~W~~ITVIGGS~~A~~PA~~V~~F~~V~~Q..STHSQGNNA~~S~~E  
VHP~~L~~R~~R~~LR~~R~~PR~~V~~AR~~I~~CL~~G~~V~~W~~AL~~I~~LV~~F~~AMP~~A~~AR~~V~~H~~R~~P~~S~~R~~C~~RYD~~L~~EV~~R~~  
VHPV~~K~~SL~~K~~LR~~R~~PR~~F~~AS~~I~~CL~~G~~V~~W~~LV~~V~~AV~~A~~MAP~~L~~V~~S~~P~~Q~~IV...QT~~N~~HT~~V~~  
CHPLRAIRWGR~~P~~RF~~A~~SL~~C~~LG~~V~~WL~~V~~V~~A~~G~~C~~L~~V~~PN~~L~~F~~V~~T~~I~~...ANG~~T~~I  
VHP~~L~~RAATY~~R~~PS~~V~~AK~~I~~LN~~G~~V~~W~~AS~~L~~LV~~T~~PI~~A~~..DTR~~P~~ARGGQAV  
  
VCFEH~~H~~YPIQAW~~R~~...A~~I~~NY~~Y~~RF~~L~~V~~G~~FL~~P~~I~~C~~LL~~I~~AS~~Y~~Q~~G~~I~~L~~RA~~V~~R~~R~~SH~~G~~  
VCFEH~~H~~Y~~P~~E~~F~~R~~R~~...G~~I~~NY~~Y~~RF~~L~~V~~G~~FL~~P~~I~~C~~LL~~I~~AS~~Y~~R~~G~~I~~L~~RA~~V~~R~~R~~SH~~G~~  
TC~~F~~E~~G~~LSK~~R~~W~~K~~T~~Y~~LS~~K~~IT~~I~~F~~I~~E~~V~~V~~G~~FL~~P~~I~~L~~LN~~V~~C~~S~~SS~~V~~L~~R~~TL~~R~~K~~P~~.A  
TC~~F~~E~~G~~LSK~~R~~W~~K~~T~~Y~~LS~~K~~IT~~I~~F~~I~~E~~V~~V~~G~~FL~~P~~I~~L~~LN~~V~~C~~S~~SS~~V~~L~~R~~TL~~R~~K~~P~~.A  
TC~~F~~E~~N~~E~~P~~ST~~W~~K~~T~~Y~~L~~S~~R~~I~~V~~I~~F~~I~~E~~IV~~G~~FF~~I~~PL~~I~~LN~~V~~T~~C~~ST~~M~~V~~L~~R~~T~~L~~N~~K~~P~~.L  
AC~~F~~E~~N~~E~~P~~AT~~W~~K~~T~~Y~~L~~S~~R~~I~~V~~I~~F~~I~~E~~IV~~G~~FF~~I~~PL~~I~~LN~~V~~T~~C~~SS~~M~~V~~L~~K~~T~~L~~T~~K~~P~~.V  
L~~C~~F~~E~~~~S~~DEL~~W~~K~~G~~R~~L~~L~~P~~V~~I~~L~~A~~E~~A~~G~~F~~LL~~P~~LA~~A~~V~~V~~Y~~S~~GR~~V~~F~~W~~T~~I~~ARP~~D~~  
V~~C~~L~~O~~.LYREKASHHAL~~M~~SL~~A~~V...AF~~T~~E~~P~~IT~~T~~V~~T~~C~~Y~~L~~L~~I~~R~~S~~L~~R~~O~~GL.  
L~~C~~H~~D~~TT~~L~~P~~E~~E~~F~~D~~H~~Y~~V~~.F~~S~~SA~~V~~M~~V~~L~~F~~G~~I~~P~~F~~L~~I~~T~~L~~V~~C~~Y~~G~~L~~M~~ARR~~L~~Y~~R~~P~~L~~P  
AC~~N~~LO~~W~~PH~~P~~A~~W~~...AV~~V~~V~~V~~T~~F~~LL~~G~~LL~~P~~V~~I~~A~~I~~G~~C~~Y~~L~~L~~I~~V~~G~~K~~M~~RA~~V~~AL

## FIG. 6B

GP68\_HUMAN  
O46685  
O15132  
P2Y9\_HUMAN  
P2Y5\_CHICK  
P2Y5\_HUMAN  
HGPRBMY3  
GPRH\_HUMAN  
O35811  
SSR4\_HUMAN

GP68\_HUMAN  
O46685  
O15132  
P2Y9\_HUMAN  
P2Y5\_CHICK  
P2Y5\_HUMAN  
HGPRBMY3  
GPRH\_HUMAN  
O35811  
SSR4\_HUMAN

GP68\_HUMAN  
O46685  
O15132  
P2Y9\_HUMAN  
P2Y5\_CHICK  
P2Y5\_HUMAN  
HGPRBMY3  
GPRH\_HUMAN  
O35811  
SSR4\_HUMAN

GP68\_HUMAN  
O46685  
O15132  
P2Y9\_HUMAN  
P2Y5\_CHICK  
P2Y5\_HUMAN  
HGPRBMY3  
GPRH\_HUMAN  
O35811  
SSR4\_HUMAN

TQ. .... [KSRKDQIQLV]LSTVVI[FLACFLPYH]VIL. .... LVRSVWEASC  
TQ. .... [KSRKDQIQLV]LSTVVI[FLACFLPYH]VLL. .... LVRSLWESSC  
TLS. . QIGTNKKKVLKMI[TVHMAV]FVVCFV[PYNSV]LFLYALVRSQAITNC  
TLS. . QIGTNKKKVLKMI[TVHMAV]FVVCFV[PYNSV]LFLYALVRSQAITNC  
TLS. . RNKLSKKKVLKMI[EVHLV]IFCFCFV[PYNI]TLILYSLMRTQTWINC  
TLS. . RSKINKTKVLKMI[EVHLI]IFCFCFV[PYNI]NLILYSLVRTQT[FVNC  
TQS. . Q. .... RRRKTVR[LL]LANLVI[FL]CFV[PYNS]TLAVYGLRSKLVAAS  
. RV. . EKRL. KTKAVRMIATVLA[FL]VCFV[PYH]VNR[VYV]LHYRSHGASC  
GAG. . QSSS. RLRSLSRTIAVVLTVFAVCFVPEHITRTIY. YQARLLQADC  
RAGWQORRSEKKITREVL[LMV]VVFVLCWMPFVYVQLNLVVTSLDAT..

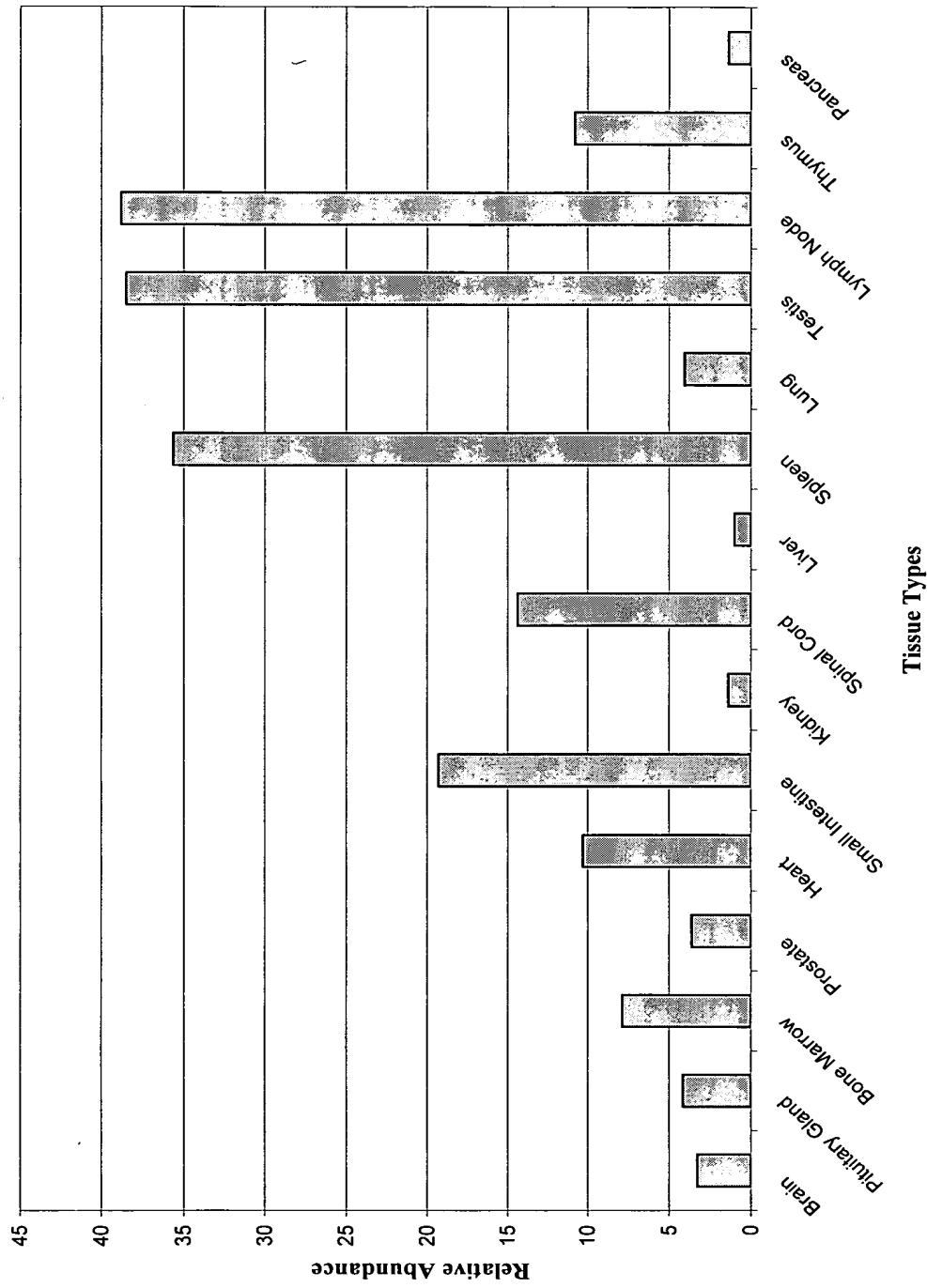
DFAKGIVFN. AYHFSLLITSFNCVADPVL[YCFVSET]THRD[LARL]RGAACLAF  
DFAKGIFN. AYHFSLLITSFNCVADPVL[YCFVSET]THRD[LARL]RGAACLAF  
FEER. FAKIMYPITLCLATLNCCFDPIYYTLESFQKSFYI. NAHIRME  
FEER. FAKIMYPITLCLATLNCCFDPIYYTLESFQKSFYI. NAHIRME  
SMVT. AVRTMYPVTL[CA]VSNCCFDPIVYYFTSDT.. NSELDKKQQVHQN  
SMVA. AVRTMYPITL[CA]VSNCCFDPIVYYFTSDT[IONSI]KMKNWSVRRS  
VPARDRVRGVL[VLMV]VLLAGANQVLDPLVYYFSAEGFRNTURGLGTPHRAR  
ATQRI. LALANRITSC[IT]SLNGALDPIMYFVAAEKFHALCNLLCGKRLK  
HVLNI. VNVVYKVTRPLASANSCLDPVBYLFTGDKYRNOLQQLCRGSK..  
..... VNHVSLIISYANSCANPILYGLSDNFRSFQ[RLC].. LR

LTCSRTGRAREAYPLGAPEASGKSGAQGEEPE[ITKLH]PAFQT[PN]SPGSG  
LTCARTGRAREAYPLGAPEASGK[...]. EDEPEV[ITRLH]PAFQT[PH]PPGMG  
SLFKTETPLTTKPSLPAI[QEEVSDQTTNNGGELM]LESTF~~~~~  
SLFKTETPLTTKPSLPAI[QEEVSDQTTNNGGELM]LESTF~~~~~  
T~~~~~  
DFRFSEVHGAENFIQHNLQTLKSKIFDNEAA~~~~~  
TSATNGTRAALAQSERSAVTTDATRPDAASQGL[IRPSD]SHSLSSFTQCPQ  
GPPPSFEGKTNES[LS]AKSEL~~~~~  
. PKP. .... RTAASSL. ALVTLHEESISRWADTHQDSTFSAYEGDRL~~~~~  
CCLLEGAGGAAEEPLDYATALKS... KGGAGC[MC]PPLPCQQEALQPEPG

GPTGRLA~~~~~  
GSPAGGLS~~~~~  
~~~~~  
~~~~~  
~~~~~  
~~~~~  
DSAL~~~~~  
~~~~~  
~~~~~  
RKRIPLTRTTF

| SEQUENCE   | SEQ ID NO: |
|------------|------------|
| GP68_HUMAN | 8          |
| O46685     | 9          |
| O15132     | 10         |
| P2Y9_HUMAN | 11         |
| P2Y5_CHICK | 12         |
| P2Y5_HUMAN | 13         |
| HGPRBMY3   | 2          |
| GPRH_HUMAN | 14         |
| O35811     | 15         |
| SSR4_HUMAN | 16         |

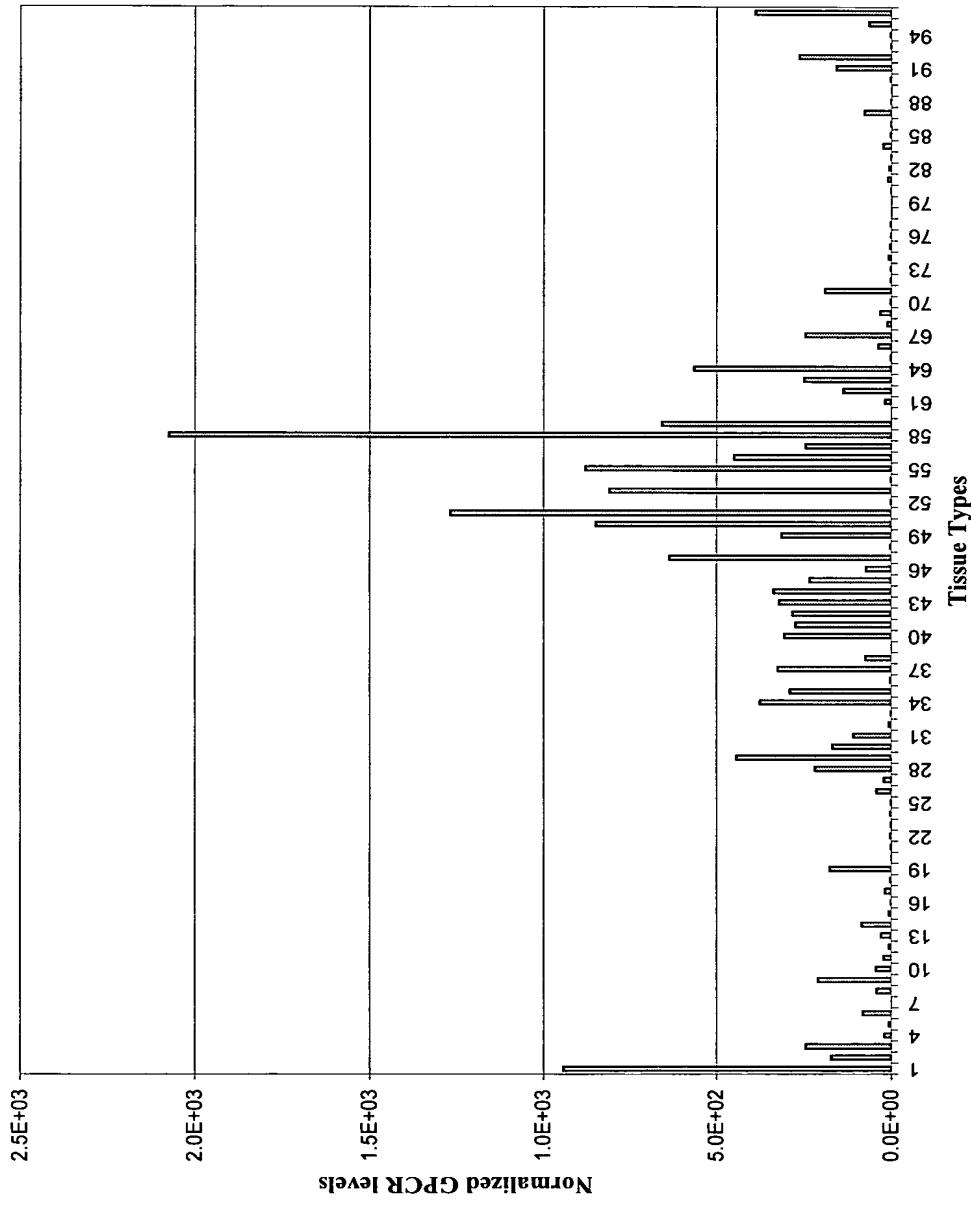
FIG. 7



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FIG. 8



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FIG. 9

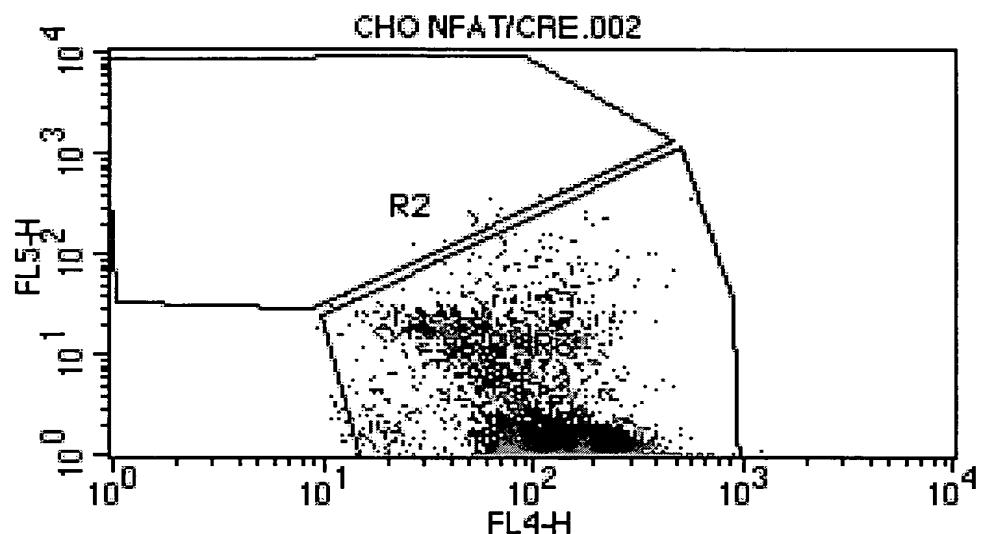
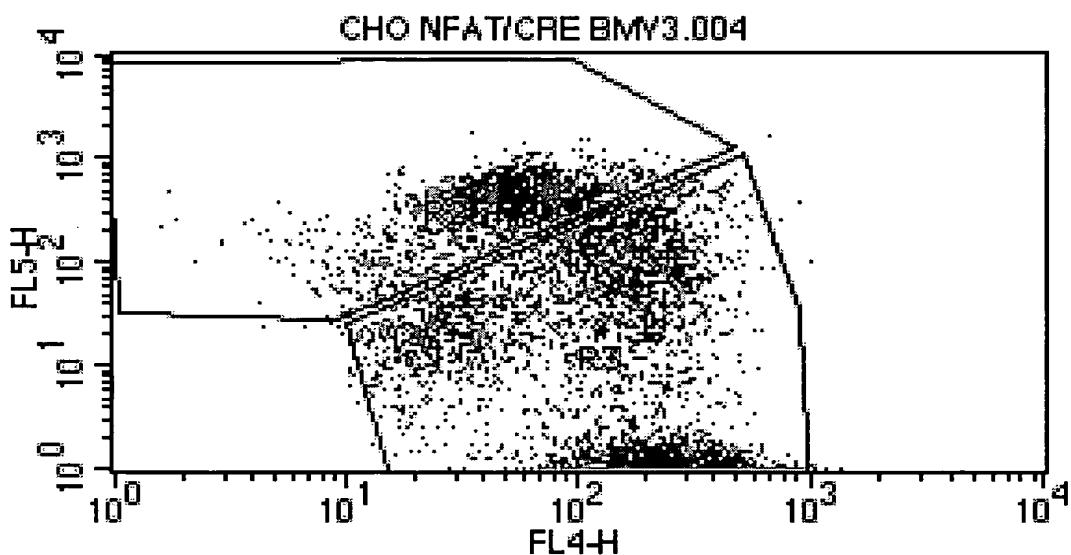


FIG. 10



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FIG. 11

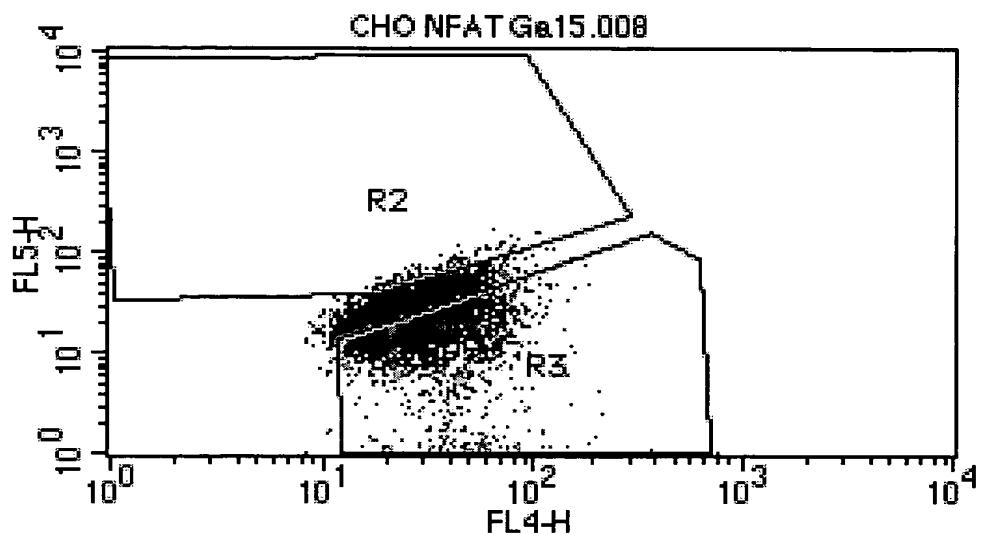
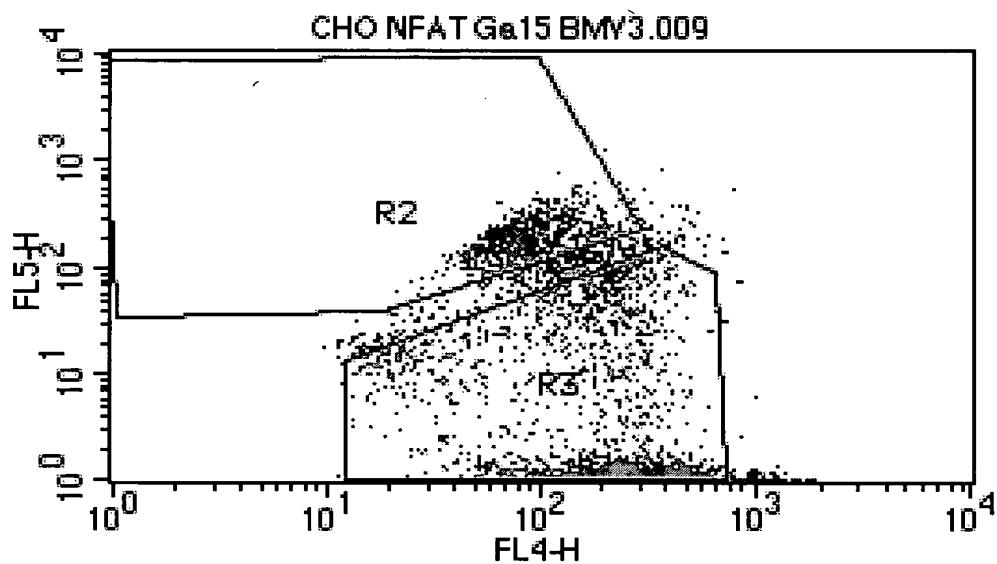
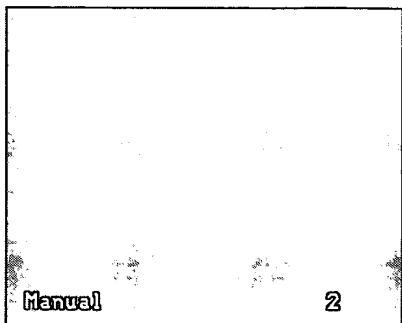


FIG. 12

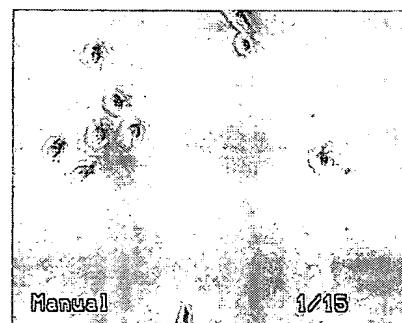


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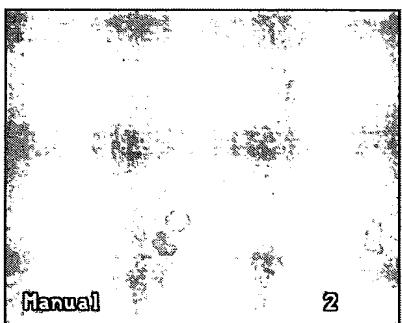
**FIG. 13A**



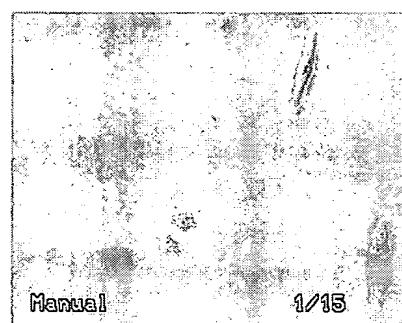
**FIG. 13B**



**FIG. 13C**

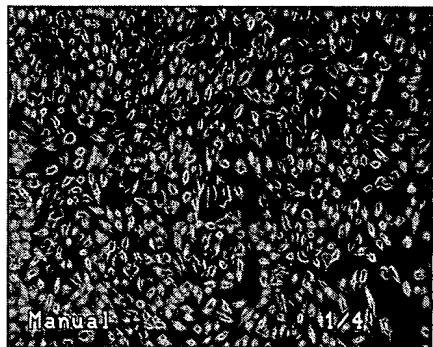


**FIG. 13D**

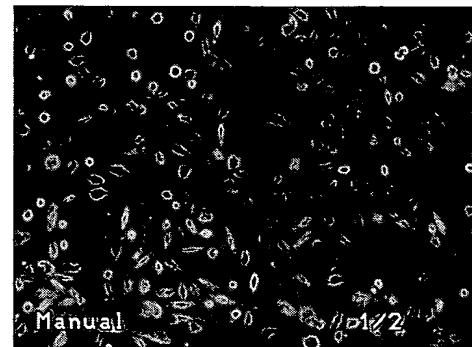


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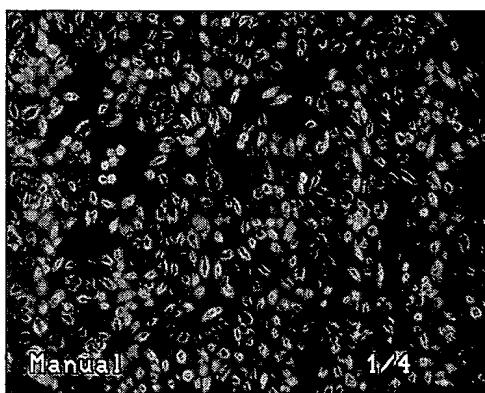
**FIG. 14A**



**FIG. 14B**



**FIG. 14C**



**FIG. 14D**

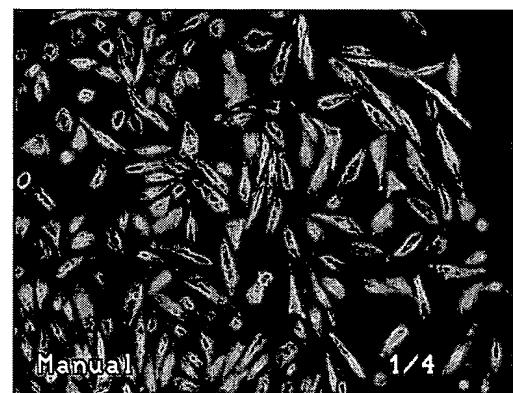


FIG. 15

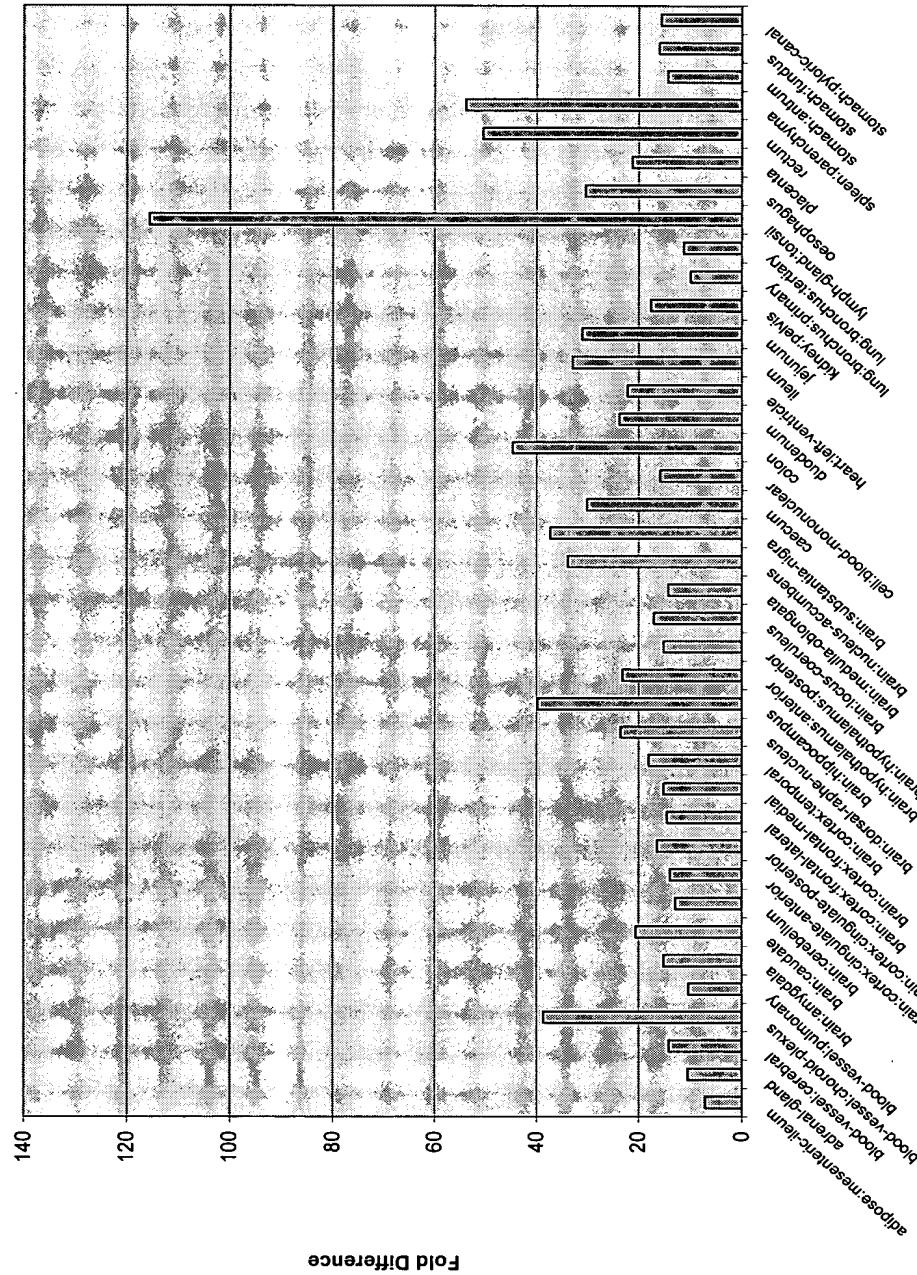
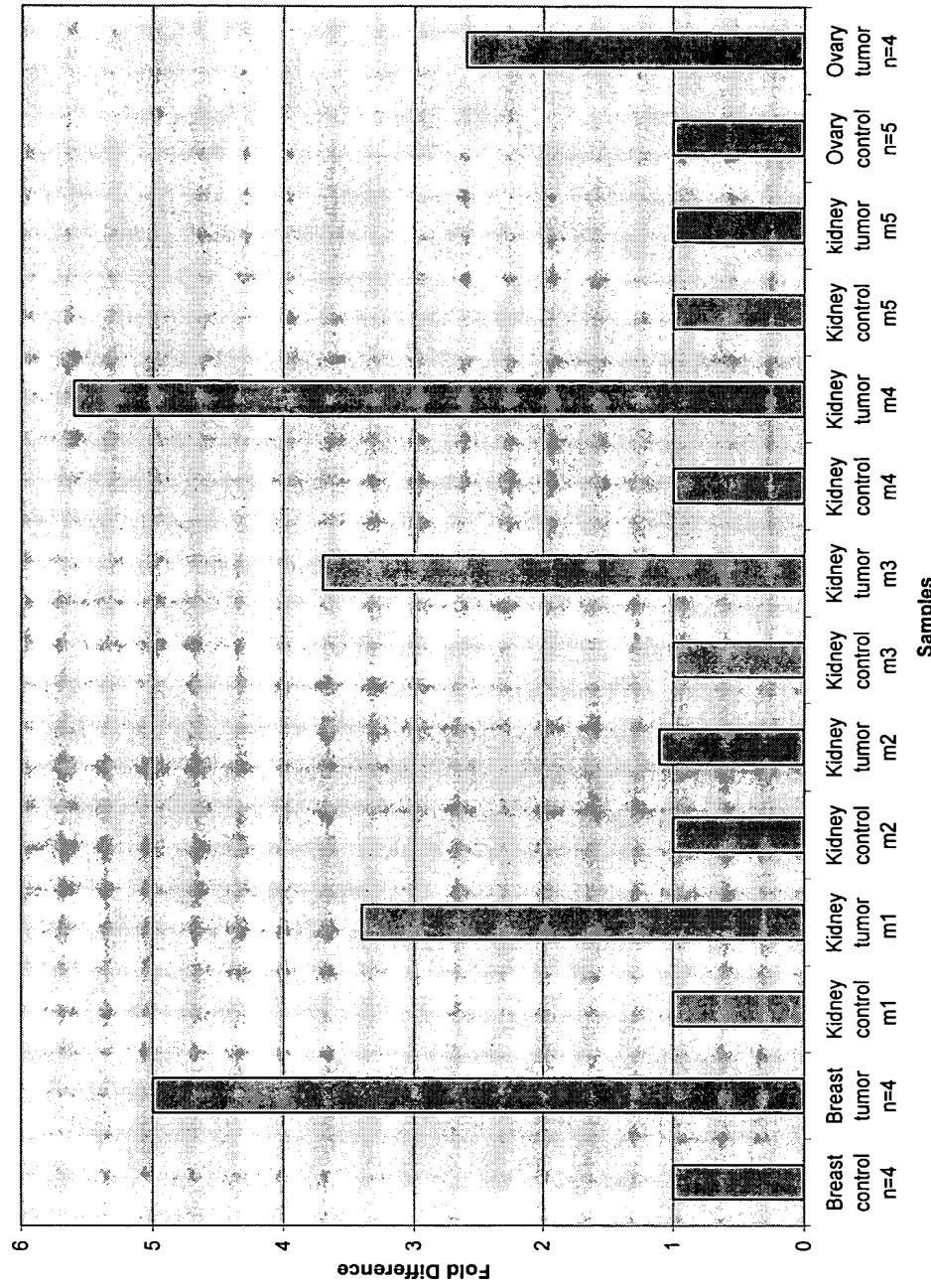
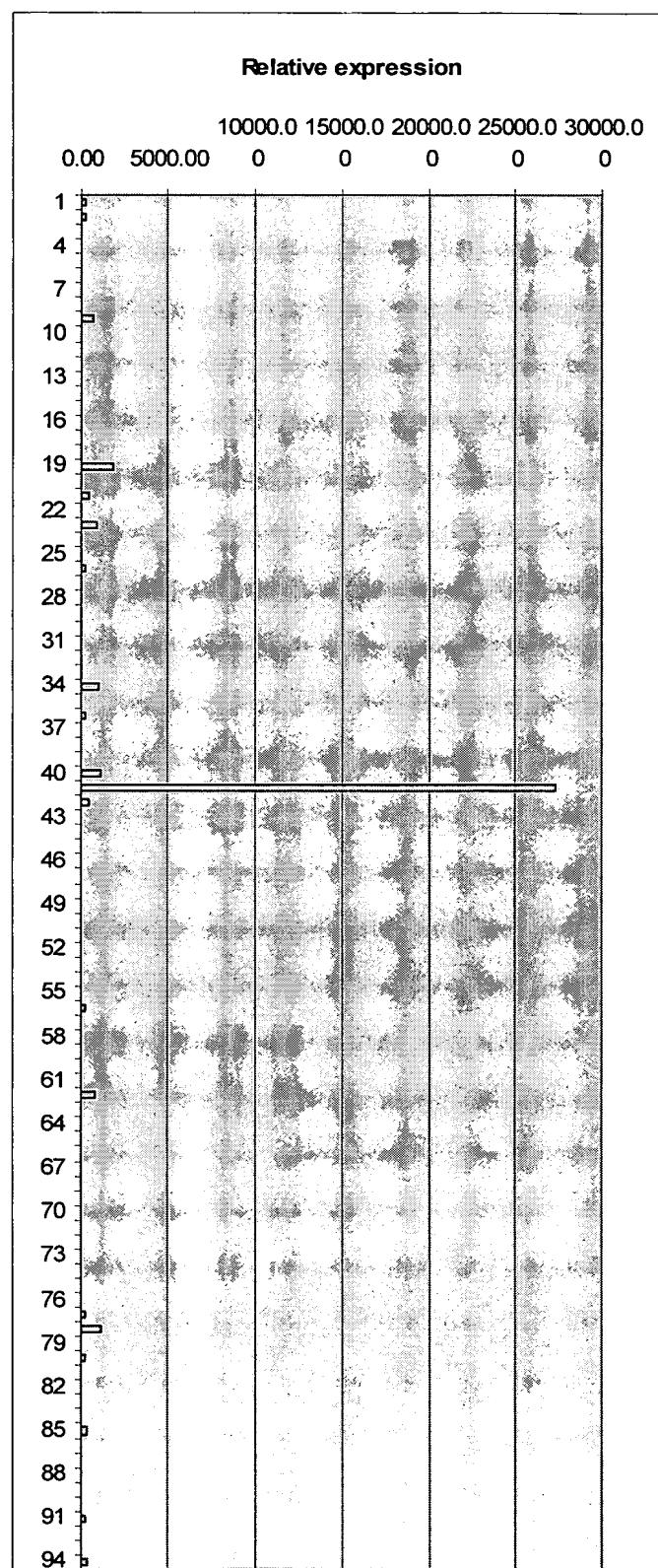


FIG. 16



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FIG. 17



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## FIG. 18A

| <u>BINDER NO.</u> | <u>SEQUENCE</u>        | <u>SEQ ID NO:</u> |
|-------------------|------------------------|-------------------|
| 1                 | LEAKIWWVPAPS           | 17                |
| 2                 | TGQTKIWWPHST           | 18                |
| 3                 | VYSKVVWLLPAGQ          | 19                |
| 4                 | HLKVWEVRSPGP           | 20                |
| 5                 | NAKVWTVPSKPP           | 21                |
| 6                 | KVW <u>I</u> PTSTWLQT  | 22                |
| 7                 | KVWSLDISAPQH           | 23                |
| 8                 | ADVLHATPSEKVVLL        | 24                |
| 9                 | KVVDMSNHKVWLVSQT       | 25                |
| 10                | NHDNTKKV <u>W</u> ILA  | 26                |
| 11                | KLWIILADNFTNR          | 35                |
| 12                | INSPHELKKLWLILPP       | 36                |
| 13                | FPHKLWVILPVKT          | 37                |
| 14                | KLWT <u>I</u> PSNDYPP  | 38                |
| 15                | KLWELLYPTVPAG          | 39                |
| 16                | KLWI PHTSQPFL          | 40                |
| 17                | KLWDITAPLPKP           | 41                |
| 18                | NAKLW <u>Q</u> I PAIPH | 42                |
| 19                | KLWVPQNRPELV           | 43                |
| 20                | KLWELLYPTVPAG          | 44                |
| 21                | TSTPHRVWQLPV           | 45                |
| 22                | TTPHRVWNLPLEAQO        | 46                |

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## FIG. 18B

| BINDER NO. | SEQUENCE                                                                                                                                                                                                   | SEQ ID NO:     |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 1          | L E A K I W V V P A P S<br>TTG GAG GCG AAG ATT TGG GTG GTG CCT GCG CCT TCT<br>CTX GAO GCX AAO ATB TGG GTX GTX CCX GCX CCX <u>TCX</u><br>TTO AGZ                                                            | 17<br>47<br>78 |
| 2          | T G Q T K I W Y P H S T<br>ACT GGG CAG ACT AAG ATT TGG TAT CCG CAT TCT ACG<br>GCX GGX CAO ACX AAO ATB TGG TAZ CCX CAZ <u>TCX</u> ACX<br>AGZ                                                                | 18<br>48<br>79 |
| 3          | V Y S K V W L L P A G Q<br>GTT TAT TCG AAG GTT TGG CTG CTT CCG GCG GGT CAG<br>GTG TAZ <u>TCX</u> AAO GTX TGG <u>CTX</u> <u>CTX</u> CCX GCX GGX CAO<br>AGZ CTO CTO                                          | 19<br>49<br>80 |
| 4          | H L K V W E V R S P G P<br>CAT CTT AAG GTG TGG GAG GTT CCG TCG CCT GGG CCT<br>CAZ <u>TCX</u> AAO GTX TGG GAO GTX <u>CGX</u> <u>TCX</u> CCX GGX CCX<br>TTO AGO AGZ                                          | 20<br>50<br>81 |
| 5          | N A K V W T V P S K P P<br>AAT GCG AAG GTG TGG ACG GTT CCG TCG AAG CCG CCT<br>AAZ GCX AAO GTX TGG ACX GTX CCX <u>TCX</u> AAO CCX CCX<br>AGZ                                                                | 21<br>51<br>82 |
| 6          | K V W I P T S T W L Q T<br>AAG GTG TGG ATT CCT ACG AGT ACT TGG CTG CAG ACT<br>AAO GTX TGG ATB CCX ACX <u>TCX</u> ACX TGG <u>CTX</u> CAO ACX<br>AGZ TTO                                                     | 22<br>52<br>83 |
| 7          | K V W S L D I S A P Q H<br>AAG GTT TGG AGT TTG GAT ATT TCG GCT CCG CAG CAT<br>AAO GTX TGG <u>TCX</u> <u>CTX</u> GAZ ATB <u>TCX</u> GCX CCX CAO CAZ<br>AGX TTO AGZ                                          | 23<br>53<br>84 |
| 8          | A D V L H A T P S E K V W L L<br>GCG GAT GTG TTG CAT GCA TAC CCC TCT GAG AAG GTC TGG CTT CTG<br>GCX GAZ GTX <u>CTX</u> CAZ GCX ACX CCX <u>TCX</u> GAO AAO GTX TGG <u>CTX</u> <u>CTX</u><br>TTO AGZ TTO TTO | 24<br>54<br>85 |
| 9          | K V V D S N H K V W L V S Q T<br>AAG GTG GTG GAT AGT AAT CAT AAG GTT TGG CTG GTT TCT CAG ACT<br>AAO GTX GTX GAZ <u>TCX</u> AAZ CAZ AAO GTX TGG <u>CTX</u> GTX <u>TCX</u> CAO ACX<br>AGZ TTO AGZ            | 25<br>55<br>86 |
| 10         | N H D N T K K V W I L A<br>AAT CAT GAT AAT ACT AAG AAG GTT TGG ATT CTG GCT<br>AAZ CAZ GAZ AAZ ACX AAO AAO GTX TGG ATB <u>CTX</u> GCX<br>TTO                                                                | 26<br>56<br>87 |
| 11         | K L W I L A D N F T N R<br>AAG CTT TGG ATT CTG GCT GAT AAT TTT ACG AAT CGG<br>AAO <u>CTX</u> TGG ATB <u>CTX</u> GCX GAZ AAZ TTZ ACX AAZ <u>CGX</u><br>TTO TTO AGO                                          | 35<br>57<br>88 |

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## FIG. 18C

| BINDER NO. | SEQUENCE                                                                                                                                                                                                           | SEQ ID NO:     |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 12         | I N S P H E L K K L W L L P P<br>ATT AAT TCT CCG CAT GAA CTT AAG AAG CTG TGG CTT CTG CCT CCG CCT<br>ATB AAZ <u>TCX</u> CCX CAZ GAO <u>CTX</u> AAO AAO <u>CTX</u> TGG <u>CTX</u> CCT CCX CCX<br>AGX TTO TTO TTO TTO | 36<br>57<br>89 |
| 13         | F P H K L W V L P V K T<br>TTT CCG CAT AAG TTG TGG GTT TTG CCG GTG AAG ACT<br>TTZ CCX CAZ AAO <u>CTX</u> TGG GTX <u>CTX</u> CCX GTX AAO ACX<br>TTO TTO                                                             | 37<br>58<br>90 |
| 14         | K L W T I P S N D Y P P<br>AAG CTG TGG ACG ATT CCT AGT AAT GAT TAT CCG CCT<br>AAO <u>CTX</u> TGG ACX ATB CCX <u>TCX</u> AAZ GAZ TAZ CCX CCX<br>TTO AGZ                                                             | 38<br>59<br>91 |
| 15         | K L W E L Y P T V P A G<br>AAG CTT TGG GAG TTG TAT CCG ACT GTG CCG GCT GGT<br>AAO <u>CTX</u> TGG GAO <u>CTX</u> TAZ CCX ACX GTX CCX GCX GGX<br>TTO TTO                                                             | 39<br>60<br>92 |
| 16         | K L W I P H T S Q P F L<br>AAG CTG TGG ATT CCT CAT ACT TCT CAG CCG TTT CTT<br>AAO <u>CTX</u> TGG ATB CCX CAZ ACX <u>TCX</u> CAO CCX TTZ <u>CTX</u><br>TTO AGZ TTO                                                  | 40<br>61<br>93 |
| 17         | K L W D I T A P L P K P<br>AAG TTG TGG GAT ATT ACG GCT CCT TTG CCT AAG CCT<br>AAO <u>CTX</u> TGG GAZ ATB ACX GCX CCX <u>CTX</u> CCX AAO CCX<br>TTO TTO                                                             | 41<br>62<br>94 |
| 18         | N A K L W Q I P A I P H<br>AAT GCG AAG CTT TGG TAG ATT CCT GCG ATT CCG CAT<br>AAZ GCX AAO <u>CTX</u> TGG CAO ATB CCX GCX ATB CCX CAZ<br>TTO                                                                        | 42<br>63<br>95 |
| 19         | K L W V P Q N R P E L V<br>AAG CTT TGG GTT CCG CAG AAT CGT CCG GAG CTG GTG<br>AAO <u>CTX</u> TGG GTX CCX CAO AAZ <u>CGX</u> CCX GAO <u>CTX</u> GTX<br>TTO AGO TTO                                                  | 43<br>67<br>96 |
| 20         | K L W E L Y P T V P A G<br>AAG CTT TGG GAG TTG TAT CCG ACT GTG CCG GCT GGT<br>AAO <u>CTX</u> TGG GAO <u>CTX</u> TAZ CCX ACX GTX CCX GCX GGX<br>TTO TTO                                                             | 44<br>68<br>97 |
| 21         | T S T P H R V W Q L P V<br>ACT TCT ACT CCT CAT AGG GTT TGG CAG CTG CCT GTT<br>ACX <u>TCX</u> ACX CCX CAZ <u>CGX</u> GTX TGG CAO <u>CTX</u> CCX GTX<br>AGZ AGO TTO                                                  | 45<br>69<br>98 |
| 22         | T T P H R V W N L P L E A Q Q<br>ACT ACT CCT CAT CGT GTA TGG AAC CTG CCC CTG GAG GCT CAG CAG<br>ACX ACX CCX CAZ <u>CGX</u> GTX TGG AAZ <u>CTX</u> CCX <u>CTX</u> GAO GCX CAO CAO<br>AGO TTO TTO                    | 46<br>70<br>99 |

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## FIG. 19A

| GPC RECEPTOR | BINDER SEQUENCE     | SEQ ID NO: |
|--------------|---------------------|------------|
| HGPRBMY11    | THGFGHRYWSVPLRS     | 73         |
| HGPRBMY23    | SRVSGAKVWFLSNWS     | 74         |
| P2Y10        | AMNSHKIWLPH         | 75         |
| P2Y10        | GLKIWSLPPHHG        | 76         |
| P2Y10        | <u>KVWQMAPTTAFS</u> | 77         |

## FIG. 19B

| GPC RECEPTOR | BINDER SEQUENCE                                                                                                                                                                        | SEQ ID NO:       |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| HGPRBMY11    | T H G F G H R V W S V P L R S<br>ACT CAT GGT TTT GGT CAT CGT GTG TGG AGT GTT CCG TTG CGT TCG<br>ACX CAZ GGX TTZ GGX CAZ CGX GTX TGG TCX GTX CCX CTX CGX TCX<br>AGO AGZ TTO AGO AGZ     | 73<br>100<br>105 |
| HGPRBMY23    | S R V S G A K V W F L S N W S<br>AGT AGG GTG TCT GGT GCG AAG GTT TGG TTT TTG AGT AAT TGG TCT<br>TCX CGX GTX TCX GGX GCX AAO GTX TGG TTZ CTX TCX AAZ TGG TCX<br>AGZ AGO AGZ TTO AGZ AGZ | 74<br>101<br>106 |
| P2Y10        | A M N S H K I W M L P H<br>GCT ATG AAT AGT CAT AAG ATT TGG ATG TTG CCG CAT<br>GCX ATG AAZ TCX CAZ AAO ATB TGG ATG CTX CCX CAZ<br>AGZ TTO AGZ                                           | 75<br>102<br>107 |
| P2Y10        | G L K I W S L P H H G<br>GGT CTG AAG ATT TGG AGT TTG CCG CCG CAT CAT GGG<br>GGX CTX AAO ATB TGG TCX CTX CCX CCX CAZ CAZ GGX<br>TTO AGZ TTO                                             | 76<br>103<br>108 |
| P2Y10        | K V W Q M A P T T A F S<br>AAG GTT TGG TAG ATG GCG CCT ACG ACT GCG TTT TCG<br>AAO GTX TGG CAO ATG GCX CCX ACX ACX GCX TTZ TCX<br>AGZ                                                   | 77<br>104<br>109 |

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**FIG. 20**

HGPRBMY11

MEPNGTFSNNNSRNCTIENFKREFFPIVYLIIFFWGVLGNGLSIYVFLQPYKKSTSVNVFMLNLAISDLLFISTL  
PFRADYYLRGSNWIFGDLACRIMSLSYVNMYSSIYFLTVLSVVRFLAMVHPFRLLHVT SIRSAWILCGIWI  
MASSIMLLDSGSEQNGSVTSCLELNLYKIAKLOTMNYIALVVGCLLPFTLSICYLLIIRVLLKVEVPESGLRVS  
HRKALTTIITLIIFFLCFLPYHTLRTVHLLTWKVGCKDRHKALVITLALAAAACFNPLLYYFAGENFKDRL  
KSALRKGHPOKAKTKCVFPVSVWLRKETRV (SEQ ID NO: 110)

HGPRBMY23

MNEPLDYLANASDFPDYAAAFGNCTDENIPLKMHYLPVIYGIIFLVGFPGNAVVISTYIFKMRPWKSSTIIMLN  
ACTDLLYLTSLPFLIHYYASGENWIFGDFMCKFIRFSFHFNLYSSILFLTCFSIFRYCVIIHPMSCFSIHKTRCA  
VVACAVVWIISLVAVIPMTFLITSTNRTNRSACLDLTSSDELNTIKWYNLILTATTFCLPLVIVTLCYTTIHTL  
THGLQTDCLKQKARRLTILLLAFYVCFLPFHILRVIRIESRLLSISCSIENQIHEAYIVSRPLAALNTFGNLL  
LYVVVSDNFQQAVCSTVRCKVSGNLEQAKKISYSNNP (SEQ ID NO: 111)

P2Y10

MANLDKYTETFKMGSNSTSTAEIFYCNVTNVKFQYSLYATTYILIFIPGLLANSAAALWVLCRFISKKNKAIIFMIN  
LSVADLAHVLSLPLRIVYYISHHWPFQRALCLLCFYLKYLKYNMYASICFLTCISLQRCFFLLKPFRARDWKRRYDV  
GISAAIWIVVGTACLPFPILRSTDLNKKSCFADLGYKQMNAVALVGMITVAELAGFVIIPVIIIAWCTWKTTISL  
RQPPMAFQGISERQKALRMVFMCNAVFFICFTPYHINFIFYTMVKEIISSCPVRIALYFHPFCLCLASLCCLL  
DPILYYFMASEFRDQLSRHGSSVTRSRLMSKESGSSMIG (SEQ ID NO: 112)